Serial No. 09/881,554
Docket No. DP-304198

In the Claims:

Please rewrite claims 1, 10, 11, 14, 21, 30, 31 and 34 as follows, and cancel claims 6, 18, 26 and 38 without prejudice to Applicant. A version of the rewritten claim(s), marked up to show all changes relative to the previous version of the claim(s), is contained on separate page(s) attached hereto as Appendix A.

1. (Amended) An electrical circuit assembly comprising two components bonded together with a joint structure, the joint structure comprising a mesh infiltrated by a solder material, a portion of the mesh extending outside of the joint structure to define a flexible jumper to a first of the components.

A1

10. (Amended) An electrical circuit assembly comprising two components bonded together with a joint structure, the joint structure comprising a mesh infiltrated by a solder material, wherein a first of the components comprises multiple electrical devices with a first set of terminals bonded together with the joint structure so as to hold the electrical devices together, a second of the components is a conductor on a substrate, and the joint structure bonds the first set of terminals to the conductor.

A2

11. (Amended) The electrical circuit assembly according to claim 10, further comprising a second joint structure comprising a mesh infiltrated by a solder material, the

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A2 cont.

mesh of the second joint structure being formed of a material having a higher thermal conductivity than the solder material of the second joint structure, the electrical devices having a second set of terminals bonded together with the second joint structure.

A3

14. (Amended) A semiconductor assembly comprising a heat-generating semiconductor device that is attached to a conductor on a substrate with a joint structure, the joint structure comprising a mesh infiltrated by a solder material that bonds together the semiconductor device, the conductor and the mesh, a portion of the mesh extending outside of the joint structure to define a flexible jumper to the semiconductor device, the mesh being formed of a material having a higher thermal conductivity than the solder material, the mesh substantially establishing the thickness of the joint structure.

A4

21. (Amended) A method of bonding together two components with a joint structure, the method comprising the step of forming the joint structure of a mesh infiltrated by a solder material, the joint structure being formed so that a portion of the mesh extends outside of the joint structure to define a flexible jumper to a first of the components.

A5

30. (Amended) A method of bonding together two components with a joint structure, the method comprising the step of forming the joint structure of a mesh

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infiltrated by a solder material, wherein a first of the components is a circuit element comprising multiple electrical devices with a first set of terminals, a second of the components is a conductor on a substrate, and the joint structure is formed to bond the first set of terminals to the substrate.

#5 cont.

31. (Amended) The method according to claim 30, further comprising the step of forming a second joint structure to bond together a second set of terminals of the electrical devices, the second joint structure comprising a mesh infiltrated by a solder material, the mesh of the second joint structure being formed of a material having a higher thermal conductivity than the solder material of the second joint structure.

34. (Amended) A method of attaching a heat-generating semiconductor device to a conductor on a substrate with a joint structure, the method comprising the steps of:

providing on the conductor a preliminary structure comprising a mesh and a solder material, the mesh being formed of a material having a higher thermal conductivity than the solder material;

#6

placing the semiconductor device on the preliminary structure; and then

forming the joint structure by heating the preliminary structure so that the solder material melts, infiltrates the mesh, and bonds together the semiconductor device,

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A6 cont.

the conductor and the mesh, a portion of the mesh extending outside of the joint structure to define a flexible jumper to the semiconductor device, the mesh substantially establishing the thickness of the joint structure.

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